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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/512,106	03/04/2005	David A Akerman	121931.00022	6468
34282	7590	02/09/2009	EXAMINER	
QUARLES & BRADY LLP			DUONG, THANH P	
ONE SOUTH CHURCH AVENUE, SUITE 1700				
TUCSON, AZ 85701-1621			ART UNIT	PAPER NUMBER
			1797	
			MAIL DATE	DELIVERY MODE
			02/09/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/512,106	AKERMAN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	TOM P. DUONG	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 02 December 2008.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 27-32,36-50 and 53 is/are pending in the application.  
 4a) Of the above claim(s) 46-50 and 53 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 27-32 and 36-45 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) 27-32,36-50 and 53 are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/29/09; 10/21/04</u> .                                       | 6) <input type="checkbox"/> Other: _____ .                        |

## DETAILED ACTION

### ***Election/Restrictions***

Applicant's election with traverse of Group I (claims 27-45) in the reply filed on 12/2/08 is acknowledged. The traversal is on the ground(s) that "all claims share the same general inventive concept of a filter including a catalyst". This is not found persuasive because of the following reasons:

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 27-45, drawn to a filter element.

Group II, claim(s) 45-53, drawn to a method of manufacture of a filter element. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The special technical features of fabricating a filter element comprising an inorganic fibers and catalyst is known as shown by Saito et al. (USPN 4,749,671), which recites a filter comprising a mixture of refractory inorganic fibers and catalytically active substance. Thus, the groups lack the special technical features.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 27-32 and 36-43 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Saito et al. (4,749,671).

Regarding claims 27 and 28, Saito et al. discloses a filter element comprising a composite homogenous structure of inorganic fibers and a catalyst (Col. 1, lines 20-34 and Col. 2, lines 37-41).

With respect to the filter element formed by “a process of injection-molding” Saito et al. does not disclose such process; however, such limitation is a product-by-process limitation, and product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Regarding claims 29-32, Saito et al. discloses the inorganic fibers of the instant claims (Col. 3, lines 62-66).

Regarding claims 36 and 39, Saito et al. discloses the precious metal (Col. 3, lines 40-55).

Regarding claim 37, Saito et al. discloses the precious metal is supported on a metal oxide particles (Table 3).

Regarding claim 38, it appears that Saito et al. discloses the precious metal or metal oxide with 0.1-1.0% of the mass of the reactant (Col. 5, lines 28-30) at most thru routine optimization.

Regarding claims 40-42, Saito et al. discloses the binder system of colloidal dispersion and modified starch (Col. 4, line 65 - Col. 5, line 8).

Regarding claim 43, Saito et al. discloses the flocculant of the instant claims (Col. 5, lines 1-8).

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. '671.

Regarding claim 45, Saito et al. discloses the amount of catalyst can be varied (Col. 5, lines 20-30). Therefore, it would have been obvious in view of Saito et al. '671 to one having ordinary skill in the art to optimize the amount catalyst and filter mass including the claimed catalyst and filter mass in order to provide the catalyst composition with a higher catalytic activity, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable

ranges involves only routine skill in the art (*In re Boesch*, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980) and (*In re Allen* 105 USPQ 233). Note, Applicants have not shown criticality of the claimed mole ratio. Note, the normal desire of scientists or artisans to improve upon what is already known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages", *In re Peterson*, 65 USPQ2d 1379 (CAFC 2003).

3. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. '671 in view of Zievers (4,968,467).

Regarding claim 44, Saito et al. '671 discloses a filter of ceramic fiber is silent with the specific type of candle filter. However, Zievers teaches that it is conventional to fabricate the candle filter with ceramic fiber to facilitate in removing particulates from a stream of hot gas.

Thus, it would have been obvious in view of Zievers to one having ordinary skill in the art to fabricate the candle filter with ceramic fiber since the use of such ceramic fiber filter to remove particulates from the exhaust gas is known in the art.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TOM P. DUONG whose telephone number is (571)272-2794. The examiner can normally be reached on 8:00AM - 4:30PM (IFP).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tom P Duong/  
Primary Examiner, Art Unit 1797